UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

April 8, 2013

Ms. Angel Deem
Virginia Department of Transportation
Environmental Division
1401 East Broad Street
Richmond, Virginia 23219

Ms. Kimberly Pryor
Virginia Department of Rail & Public Transportation
600 East Main Street, Suite 2102
Richmond, Virginia 23219

Mr. John Simkins
Federal Highway Administration
400 North 8th Street
Richmond, Virginia 23240

Re: Tier 1 Draft Environmental Impact Statement for Interstate 66 from US Route 15 in Prince William County to Interstate 495 in Fairfax County Virginia (CEQ #20130037)

Dear Ms. Deem, Ms. Pryor, and Mr. Simkins,

In accordance with the National Environmental Policy Act of 1969, Section 309 of the Clean Air Act and the Council on Environmental Quality regulations implementing NEPA (40 CFR 1500-1508), the U.S. Environmental Agency (EPA) has reviewed the Tier 1 Draft Environmental Impact Study (DEIS) referenced above. The Virginia Department of Transportation (VDOT) and the Virginia Department of Rail and Public Transportation (VDRPT), in cooperation with the Federal Highway Administration (FHWA), are studying the potential environmental impacts of transportation improvement concepts along Interstate 66 (I-66). This Tier 1 study provides conceptual level options that include corridor-wide multimodal concepts and assists in making informed decisions about the best program of near-term and long-term transportation improvements. The study corridor is comprised of the 25-mile section of the corridor that extends from US 15 in Prince William County east to I-495 (Capital Beltway) in Fairfax County. There are currently eleven general-purpose traffic interchanges and two High Occupancy Vehicle (HOV)-dedicated interchanges.

The identified needs of the corridor include: transportation capacity deficiencies, major points of congestion, limited travel mode choices, safety deficiencies, and lack of travel

predictability. The Tier 1 study has identified ten improvement concepts to address the needs including the addition of general purpose lanes, conversion to managed lanes, Metrorail extension, light rail transit, bus rapid transit, Virginia Railway Express (VRE) extension, improve spot locations/chokepoints, intermodal connectivity, safety improvements, and transportation communication and technology. The VRE is not within the I-66 corridor, but roughly parallels it to the south approximately five miles. The document states that none of the improvement concepts as stand-alone alternatives would meet all of the needs identified in the study. The document then groups the capacity improvement concepts, the first six listed above, alone and in combination to identify 47 separate improvement concept scenarios (ICSs) to address the forecasted capacity for 2040.

The potential impacts to land use and the environment are broken out into four general types, associated with the location of the potential transportation expansion within the corridor, such as within the median or alongside the right of way. The potential impacts for Metrorail extension, light rail transit, and bus rapid transit is expected to be placed in the current median potentially impacting up to 3.6 acres of wetlands and 5,172 linear feet of stream. The lane additions would occur on the outside of the current lanes and would have a footprint from 270 feet up to 355 feet depending on the number of lanes. The potential impacts associated with these configurations range from 6.8 acres to 17.4 acres of wetlands and 6,354 linear feet up to 9,703 linear feet of stream channel. The third is the interchange footprint which is the existing configuration with the footprint expanded 100 feet. This increase could potentially impact 9.4 acres of wetlands and 5,634 linear feet of stream in the area adjacent to the current 13 interchanges. The VRE is a 100 corridor extending from the current end point to the Haymarket area. The potential impacts associated with the VRE corridor improvements include 7.2 acres of wetlands and 1,048 linear feet of stream. If the most expansive improvements were adopted, the estimate of impacts could be up to approximately 37 acres of wetland, and 74,000 linear feet of stream channel.

It is our understanding from the Tier 1 Draft EIS that decisions will be made following completion of the Tier 1 study. It is unclear if the Tier 1 Final EIS will present these decisions and allow for comment. Though a Draft EIS does not have to state a preferred alternative, the Final EIS should present the concepts that will be carried forward to the Tier 2 study. It should also present, to the extent possible, the type of NEPA analysis expected, and the potential breakdown of the studies (by geographic area or transportation mode, etc). The Tier I DEIS presents a level of analysis more typical of a planning study. EPA commends the use of NEPA for planning purposes, allowing for public and agency input at the early stages of development. A consequence of this though is that the document did not include the detail or sense of direction of the outcome of the planning exercise. It is highly recommended that further study continue at the Tier 2 and allow the public and agency input, such as through an EIS process, and give opportunity for better identification of natural and cultural resources and resource functions and values, approaches for avoidance and minimization of impacts, etc.

EPA recommends decisions presented in the Tier 1 Final EIS include furthering development of transit options in the corridor, furthering intermodal connections to maximize use of multimodal functions in the corridor, and Transportation Demand Management (TDM). Though use of existing alignment is generally considered to deliver less environmental harm, it

may be preferable to not pursue the widest expansion of the outside right-of-way, if the transportation mobility need could be adequately improved by promoting and expanding of the use of mass transit, and improvements in TDM; including reducing rides by Single-Occupant Vehicles, etc. This could result in minimizing impacts to the resources adjoining the corridor.

If expansion or improvements of the highway and/or interchanges is recommended in the Tier 1 Final EIS, it will be important to further study the secondary growth implications of such a recommendation. The outcome of an analysis of different scenarios of expansion of highway, transit, etc to land use would be useful in decision making for the planning of the transportation infrastructure in the corridor. Analysis of potential for secondary growth may be key to transportation planning. If highway improvements are recommended in the Tier 1 Final EIS to be studied at the Tier 2 level, consideration should be given to upgrades to existing highway infrastructure including, for example, stormwater management, stream crossings or wildlife passage, which are likely out-of-date. This could potentially be incorporated into road improvement design in Tier 2 alternatives.

Based on our review of the Tier 1 DEIS, EPA has rated the potential environmental impacts associated with the build concepts as Environmental Concerns ("EC") and the adequacy of the impact statement as "2" (Insufficient Information). This rating is due to the potential direct impacts of the proposed alternatives on aquatic resources, including streams, wetlands and floodplains, and terrestrial resources, including parkland. Environmental Justice (EJ) methodology for identifying communities of concern should be reviewed; other suggestions for EJ analysis are attached. Detailed comments on the Tier 1 DEIS are enclosed with this letter. A description of our rating system can be found at: www.epa.gov/compliance/nepa/comments/ratings.html.

Please consider the issues, questions and comments included in this letter and enclosure. EPA would appreciate the opportunity to discuss the comments provided here in. Thank you for the opportunity to review and comment on the Tier 1 DEIS for I-66. EPA looks forward to receiving and reviewing the additional NEPA documents and the continued cooperation with VDOT on this project. If you have any questions or comments regarding this letter, please feel free to contact Mr. Mark Douglas at 215-814-2767 or douglas.mark@epa.gov.

Sincerely,

Barbara Rudnick
NEPA Team Leader
Office of Environmental Programs

Enclosure

Technical Comments

Purpose and Need

- Chapter 2 should include a clear, concise, and brief statement of the project's purpose and need. While the chapter does provide details into the transportation needs of the corridor and a summary of the needs, it would be helpful if this information could be merged into a single statement.
- What is the reason for current conditions in the roadways that lead to the statements on page ES-4: Over half of the corridor's peak direction roadway miles operate at a Level of Service (LOS) E or LOS F in the AM peak. Nearly two-thirds of the corridor's peak direction roadway miles operate at a LOS E or LOS F in the PM peak.
  And similarly, the projected LOS for 2040 is expected that all AM eastbound traffic will be at F, but westbound peak PM traffic 90% of the segments will be at F.
  It would be expected that this should reflect nearly the same amount of traffic, as they are the same group of commuters; please explain if this is it a reflection of roadway design, commuter travel timing, or other condition.
- Table 2-1 and 2-2 on page 2-8 lists studies, projects in design phase, and projects under construction that are either in the study corridor or involves transportation methods that may affect the transportation demands on the study area. It is unclear if the funded projects in Table 2-2 are incorporated into baseline analysis for transportation demand and forecasted need for 2040. In addition, EPA suggests the Tier 2 planning and analysis incorporate the potential for the projects and studies listed in Table 2-1.
- The highest projected traffic growth throughout the document is up 66% increase in demand, but this high demand is coming from a relatively small percentage of overall traffic on I-66. Overall traffic is expected to increase 10-23%. EPA suggests the analysis of what could be characterized as general sections or segments of I-66 and associated demand be also included in the planning if utilizing the ICSs. This would allow for more specific utilization of the improvement concepts and thereby avoiding viewing the 25 mile corridor as uniform demand for the forecasted 2040 traffic.

Improvement Concepts

- The 47 Improvement Concept Scenarios should identify which measures fully meet the purpose and need.
- There appears to be a need to better link the ICS evaluation (summarized in table 3.4) and the potential environmental impacts for the Build Improvement Concepts (summarized in table 5-2) or perhaps the environmental impacts should be assessed on the ICSs since no single Build Improvement Concept fully meets the project's purpose and needs.
- Based on the information provided, it is unclear how the study of the ten Build Improvement Concepts 7-11 is incorporated into the ICSs as proposed. Please clarify.
- Throughout the study, it is pointed out that the non-capacity improvements (improve spot locations/chokepoints, intermodal connectivity, safety improvements, and transportation communication and technology) a less detailed evaluation in the development of the documentation as they are more geographically focused and/or would involve lesser levels of potential impacts. This seems to run counter to the stated intent of improving the transportation along I-66 and in fact would address most of the identified needs for

improvement in the study categories. EPA suggests the Tier 2 study focus on these non-capacity improvements first and utilize them as a baseline to then incorporate into the development of alternatives to be further studied.

- The majority of the eastern most interchanges are at low LOS. EPA suggest the study focus on how the 47 ICSs could be used to meet the purpose and need of the study by systematically analyzing the various options starting at the interchange of I-495 and progressively work west. This would allow for the least environmentally damaging of the ICSs to be developed.
- EPA suggests the ICSs not be potentially eliminated if the concepts are somehow considered competing with each other as discussed on page 3-7. There may be a beneficial use of competing concepts that will increase transportation, reduce cost for transportation improvement and reduce impacts to the landscape and the environment.
- What are the plans for I-66 west of the study area?
- Table 3.4 (page 3-15) summarizes the analysis of the 47 improvement concept scenarios (ICSs) based on a metrics including: ability to accommodate demand, ability to enhance modal choices, generalized physical width, space efficiency, generalized planning-level cost, and cost per incremental person-trip accommodated. It would be helpful if this table was arranged by top ten rankings (most yellow blocks down to most blue blocks).

Natural Resources

- Please state how the project will comply with EO 13112 on invasive species; such as monitoring, adaptive management, remediation, etc
- EPA suggests the study include the coordination of Fish and Wildlife as well as Virginia agencies regarding state and federal threatened and endangered species and species of concern.
- In reference to Air quality impacts; under the "General Purpose Lanes" section, explain in more detail where the anticipated mobile source emissions reductions will come from: name specific programs that you anticipate to be in place in the future.
- In reference to Air quality impacts; under the "General Purpose Lanes" section, there is a discussion of the pollutants that would increase and decrease with increasing vehicle speeds. There should be an explanation of how the increased vehicle speeds would affect particulate matter emissions levels, since the project is in a nonattainment area for fine particulate matter ($PM_{2.5}$).
- In reference to Air quality impacts; under the "VRE Extension" section, an estimate of the amount of emissions that will be saved by the extension of the VRE via vehicle traffic reduction and an estimate of the increase of emissions due to the extension of the VRE should be provided and comparison should be made to reaffirm that an extension of the VRE would not worsen air quality.

Environmental Justice

- The calculations used to identify minority and low income populations in the study area are incorrect and should be corrected. It appears that the guidance provided by CEQ has been incorrectly interpreted. The guidance as cited, "CEQ's *Environmental Justice Guidance under the National Environmental Policy Act* (CEQ, 1997), the criteria for identification of minority populations within the study area included census tracts in

which 1) the minority population percentage exceeds 50%, or 2) the minority population is "meaningfully greater" than the minority population percentage in the "general population or other appropriate unit of geographic analysis." The guidance as applied, "For the purpose of this EIS, the census data for the City of Fairfax, Fairfax County, and Prince William County were combined to establish a regional average for comparison to the census tracts within the I-66 Study Area. Minority population percentages exceeding ten percent above the regional average are considered to have met the second criteria1." "Seven census tracts within the I-66 Study Arca havc minority populations of greater than 50%. Within the region, the average minority population is 38.5%. An additional three census tracts have minority populations greater than 10% above the regional average (i.e., greater than 48.5%)." "The regional average low-income population percentage is 5.2%. Only two census tracts have low-income populations greater than 10% above the regional average (i.e., greater than 15.2%)." "The regional average for populations with limited English proficiency is 14.4%. There are seven census tracts with an LEP population greater than 10% above the regional average (i.e. greater than 24.4%)." The problem with the application of the "meaningfully greater" calculations is twofold. First, from a mathematical standpoint this is wrong. It is not the Regional Average plus an additional 10 percentage points added on, the Regional average plus 10% of that average. It is a simple math word problem. 38.5 X 1.1 = 42.35%. In other words, 38.5 percent plus an additional 10% of the average is 3.85% , added to 38.5% which equals 42.35% (38.5 X .1 = 3.85 + 38.5 = 42.35). Addition of another 10 percentage points to the Regional Average is actually an increase of nearly 26% (38.5X 1.26 = 48.51). This is totally unjustified. It represents a skewing of the data and places and unfair and inappropriate burden on the citizens who will be overlooked due to this improper use of mathematics. This reviewer has been conducting these EJ reviews since the 1990s, and I find this application of statistics to be disturbing. The benchmarks should be treated (mathematically like food, clothing or commodity prices. If a commodity has a price of $38.50, and that price increases by 10%, it goes up to $42.35, not to $48.50, This calculation is done the same way 38.50 X.1 + 38.5 = 42.35.

- The Correct values should be 42.35 % for minority populations, 6.3% for low income populations (not 15.2% that was an increase of nearly 200 percent), and 15.84% for LEP (not 24.4%). All tables and associated language relying on the incorrect benchmark values should be changed. Due to these errors, the conclusions regarding areas of Environmental Justice concern are not valid.

Recommendations for Tier 2 study, commitments in Final Tier 1 EIS

- The Tier 2 study should discuss the impacts of additional capacity of I-66 on the connecting roadways which are not discussed in this document. This would include the impact to the secondary roads and associated existing commuting infrastructure.
- As reported in Section 2.3.2, the area population and job growth is expected in the communities surrounding the study area. EPA suggests the Tier 2 analysis incorporate any and all secondary and cumulative impacts associated with the proposed ICSs. This cumulative analysis should begin with when I-66 was first built and account for the development that has occurred in the respective watersheds.

- The DEIS does not include mitigation measures related to Build Improvement Concepts. At a minimum these measures should decrease pollution emissions, construction impacts, esthetic intrusion, as well as relocation assistance, possible land use controls that could be enacted, as well as other possible efforts.
- EPA suggests the Tier 2 proactively identify all avoidance and minimization opportunities for impacts to the environment, historical sites, and personal property with all ICSs that are further evaluated.
- EPA suggests the study include stormwater control analysis early in the development of the ICSs. This would also include retrograde plans for the current stormwater measures in place. Current and future stormwater management facilities should not be placed within waters of the US. Plans should be made to relocate and upgrade such facilities to upland areas.
- If excess material results from activities, it should be identified and quantified to the extent possible in the Tier 2 studies. This issue should be analyzed in the NEPA document discussing disposal locations and transportation of the material.
- If there are any hazardous materials generated as a result of the implementation of one of the ICSs from construction and/or expansion, the document should discuss the handling and disposal of the materials.